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09/957,496	09/20/2001	Susumu Senshu	450100-03493	3144

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FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT PAPER NUMBER

2652

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/957,496

Applicant(s)

SENSHU, SUSUMU

Examiner

Peter Vincent Agustin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Replacement drawings were received on February 7, 2005. These drawings are acceptable.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 8-10 & 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Gotoh et al. (US 6,052,465).

In regard to claim 1, Gotoh et al. disclose a disk-like recording medium (see Figure 1, element 819d) for concentrically recording auxiliary information of a disk in a second area (note ADDRESS areas in Figure 5d) other than a first area (area where information is recorded) for recording contents data of said disk by a predetermined code, the recording medium comprising: n blocks, each block of said n blocks obtained by dividing said second area into n equal parts in a circumferential direction (note blocks n, n+1,...etc. in Figure 5d); and m frames, each frame of said m frames obtained by dividing said each block into m equal parts in the circumferential direction (note how address block n is divided into m frames in Figure 5e), wherein said auxiliary information is arranged in said frames in such a manner as to be at equal intervals in the circumferential direction, and wherein said each frame includes a synchronization signal (note "FRAME SYNCHRONIZING SIGNAL" in Figure 5e) whose pattern is formed by arranging

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marks or spaces in three or more contiguous channel bits (see Figure 34A), such that said synchronization signal provides synchronism necessary for a playback apparatus to read said auxiliary information recorded in said second area (a property of synchronization signals which is very well known in the art).

In regard to claim 2, Gotoh et al. disclose a disk-like recording medium as claimed in claim 1 wherein in one of said frames, k channel bits are arranged at intervals obtained by dividing said frame into k equal parts (see Figure 5e: note that "REPRODUCED CLOCK" = channel bit clock, see for example Yumiba et al. (US 6,661,768), column 14, lines 41-46).

In regard to claim 3, Gotoh et al. disclose that said auxiliary information is modulated by a modulation method capable of word synchronization or bit synchronization (understood from Figure 34A; see also Figure 23, elements 910 & 913 and column 19, lines 44-48).

In regard to claim 4, Gotoh et al. disclose that said modulation method is a phase encoding method or a 4-1 modulation method (column 19, line 45).

In regard to claim 5, Gotoh et al. disclose that when a value of said m is two or more, the number of kinds of said synchronization signals is two or more and m or less (see Figure 5e and "SYNC CODE" column in Figure 34A).

In regard to claim 6, Gotoh et al. disclose that an error correction code is added to said auxiliary information (see Figure 23, element 907 and Figure 33A).

In regard to claim 8, Gotoh et al. disclose a disk recording apparatus (Figure 23) for recording auxiliary information of a disk (800) concentrically over a plurality of tracks in a second area (note ADDRESS areas in Figure 5d) other than a first area (area where information is recorded) for recording contents data of said disk by a predetermined code comprising:

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rotating means (Figure 23, element 915) for rotating said disk; generating means (913) for generating a channel clock corresponding to an interval obtained by dividing one frame into k equal parts, where n blocks, each block having a length obtained by dividing said second area into n equal parts in a circumferential direction, are generated, and m frames, each frame having a length obtained by dividing said each block into m equal parts in the circumferential direction, are generated (see claim 1 rejection above), wherein said channel clock is derived from a synchronization signal whose pattern is formed by arranging marks or spaces in three or more contiguous channel bits (see Figure 34A), such that said channel clock is required for recording said auxiliary information in said second area; control means (inherent: see note) for controlling rotation of said disk so that one rotation of said disk is in synchronism with a cycle of $n \times m \times k$ channel clocks (note: referring to Figures 5d and 5e, since the claimed “ n ” is the total number of address blocks in the auxiliary information area, the claimed “ $n \times m \times k$ channel clocks” is simply the total number of channel bit clocks in the entire auxiliary information area, which encompasses one full rotation; therefore, one rotation of the disk is in synchronism with a cycle of $n \times m \times k$ channel clocks, as claimed); modulating means (910) for modulating said auxiliary information on the basis of said channel clock generated by said generating means; and recording means (911, 929, 912 & 914) for recording said auxiliary information modulated by said modulating means on said disk.

Claims 9 & 10 have limitations that are similar to those of claim 8; thus, they are rejected on the same basis. Furthermore, in regard to claim 10, Gotoh et al. disclose a rotating means for rotating said disk at a constant angular velocity (column 25, lines 4-10); and demodulating means for sampling a signal outputted by said playback means on the basis of said clock

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generated by said generating means and demodulating said channel bits, or words while correcting said channel bits, or the words (see Figure 15, elements 591 & 36).

Claim 13 has limitations that are similar to those of claim 10; thus, it is rejected on the same basis.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11 & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gotoh et al. in view of Horiguchi (US 5,387,996).

For a description of Gotoh et al., see the rejection above. Furthermore, in regard to claim 11, Gotoh et al. disclose correcting means for making error correction on the basis of an error correction code included in said auxiliary information (Figure 15, elements 591, 592 & 36; column 15, lines 7-10). However, in regard to claim 11, Gotoh et al. do not explicitly disclose determining correct auxiliary information by majority rule; and in claim 12, Gotoh et al. do not explicitly disclose that said correcting means makes error correction on auxiliary information obtained by collecting portions determined by majority rule.

Horiguchi discloses using majority rule for error correction, which necessarily involves the claimed "collecting portions determined by majority rule" of claim 12 (see column 12, lines 52-58). It would have been obvious to one of ordinary skill in the art at the time of the invention by the Applicant to have used the majority rule of Horiguchi for determining the correct

auxiliary information of Gotoh et al., the motivation being to provide high error detection/correction, thereby ensuring accurate reproduction of the auxiliary information.

Response to Arguments

6. Applicant's arguments filed February 7, 2005 have been fully considered but they are not persuasive.

The Applicant argues on page 12, last paragraph that "Gotoh fails to teach or suggest providing an area for recording auxiliary information, wherein each frame includes a synchronization signal whose pattern is formed by arranging marks or spaces in three or more contiguous channel bits, such that the synchronization signal provides synchronism necessary for a playback apparatus to read the recorded auxiliary information." The Examiner disagrees. Note ADDRESS areas in Figure 5d, which corresponds to an area for recording auxiliary information. Figure 5e shows a "FRAME SYNCHRONIZING SIGNAL" for each frame, whose pattern is formed with three or more contiguous channel bits as shown in Figure 34A. This synchronization signal provides synchronism necessary for a playback apparatus to read the recorded auxiliary information, which is a well-known property of synchronization signals in the art.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Friday 9:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Vincent Agustin
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BRIAN E. MILLER
PRIMARY EXAMINER